IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Ming-Hsuan Yang

APPLICATION NO.:   10/621,872

FILING DATE: July 16, 2003

TITLE: Extended Isomap Using Fisher Linear Discriminant and Kernel
                     Fisher Linear Discriminant

EXAMINER: Unknown

GROUP ART UNIT: 2621

ATTY. DKT. NO.:   23085-07128

COMMISSIONER FOR PATENTS
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ALEXANDRIA, VA 22313-01450

INFORMATION DISCLOSURE STATEMENT
Under 37 CFR §§ 1.56 and 1.97-98

SIR:

Pursuant to the provisions of 37 CFR §§ 1.56 and 1.97-98, enclosed herewith is modified form PTO-1449/PTO-8A listing references for consideration by the Examiner. Enclosed is a copy of each listed reference that may be material to the examination of this application, and for which there may be a duty to disclose.

The filing of this Information Disclosure Statement shall not be construed as a representation regarding the completeness of the list of references, or that inclusion of a reference in this list is an admission that it is prior art or is pertinent to this application, or that a search has been made, or as an admission that the information listed is, or may be considered to be, material to patentability, or that no other material information exists, and shall not be construed as an admission against interest in any manner.

This Information Disclosure Statement is being filed:

☒   within three months of the filing date of the application, or date of entry into the national stage of an international application, or before the mailing date of a first office action on the merits, whichever event last occurred;

☐ before the mailing of a first official action after the filing of a request for continued examination (RCE) under 37 CFR § 1.114;

☐ after three months of the filing date of this national application or the date of entry of the national stage in an international application, or after the mailing date of the first official action on the merits, whichever event last occurred, but before the mailing date of the first to occur of either: (1) a final action under 37 CFR §1.113; or (2) an action that otherwise closes prosecution in the application, and:

    ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR.§ 1.97(c); OR

    ☐ Applicant certifies pursuant to 37 CFR § 1.97(e) that:

        ☐ each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; OR

        ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement;

☐ on or before the payment of the issue fee but after the mailing date of the first to occur of either: (1) a final action under 37 CFR § 1.113; or (2) an action that otherwise closes prosecution in the application, and:

    ☐ Applicant certifies pursuant to 37 CFR. § 1.97(e) that:

        ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; or

        ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a

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> foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement; AND
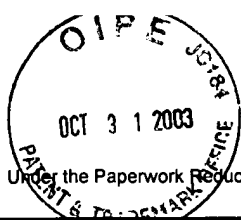
☐   attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR.§ 1.97(c); OR

☐   after the payment of the issue fee. Applicant requests that the information contained in this Information Disclosure Statement be placed in the file according to 37 CFR § 1.97(i), although the information may not be considered by the USPTO.

☐   This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application No. [APPLICATION NUMBER], filed on [FILING DATE], and the references cited therein are hereby referenced, but are not required to be provided in this application under 37 CFR § 1.98(d).

☐   Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not received by any individual designated in 37 CFR § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement. 37 CFR § 1.704(d).

☒   Applicant submits that no fee is required for the consideration of this Information Disclosure Statement.

Consideration of the listed references and favorable action are solicited.

<div align="right">

Respectfully submitted,
MING-HSUAN YANG

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Dated: October 29, 2003   By: _____

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Substitute for form 1449A/PTO				*Complete if Kn wn*	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application No.	10/621,872
				Filing Date	July 16, 2003
				First Named Inventor	Ming-Hsuan Yang
				Art Unit	2621
				Examiner Name	Unknown
Sheet	1	of	4	Attorney Docket Number	23085-07128

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document No. Number – Kind Code[2] (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
	A	US 6,112,195	8-29-2000	Burges
	B	US RE. 36,041	1-12-1999	Turk, et al.
	C	US 5,710,833	1-20-1998	Moghaddam, et al.
	D	US 5,164,992	11-17-1992	Turk, et al.

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] – Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Aplicant of Cited Document	T[6]
	E	WO 03/049033 A1	6-12-2003	Honda Giken Kogyo Kabushiki Kaisha	

OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[6]
	F	ADINI, YAEL et al., *"Face Recognition: The Problem of Compensating for Changes in Illumination Direction,"* IEEE Transactions on Pattern Analysis and Machine Intelligence (July 1997), Vol. 19, No. 7, pp. 721-732.	
	G	BARTLETT, MARIAN STEWART, *"Face Image Analysis by Unsupervised Learning and Redundancy Reduction,"* Doctorial Dissertation at University of California at San Diego (1998).	
	H	BARTLETT, MARIAN STEWART, *"Independent Component Representations for Face Recognition,"* Proceedings of the SPIE Symposium on Electronic Imaging: Science and Technology; Conference on Human Vision and Electronic Imaging III, San Jose, CA (January 1998), pp. 528-539.	
	I	BARTLETT, MARIAN STEWART et al., *"Viewpoint Invariant Face Recognition Using Independent Component Analysis and Attractor Networks,"* Advances in Neural Information Processing Systems (1997), Vol. 9 pp. 817-823.	

Examiner Signature		Date Considered	

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	J	BAUDAT, G. et al, "*Generalized Discriminant Analysis Using a Kernel Approach,*" Neural Computation (2000), Vol. 12, pp. 2385-2404.	
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	U	MIKA, SEBASTIAN et al., "*Fisher Discriminant Analysis With Kernels,*" Proceedings of IEEE Neural Networks for Signal Processing IX (June 1999), pp 41-48.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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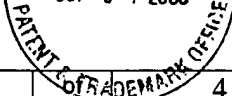
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	V	MIKA, SEBASTIAN et al., "*Invariant Feature Extraction and Classification in Kernel Spaces,*" Advances in Neural Information Processing Systems (2000), Vol. 12, pp. 526-532.	
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	X	MOGHADDAM, BABACK, "*Probabilistic Visual Learning for Object Representation,*" IEEE Transactions on Pattern Analysis and Machine Intelligence (July 1997), Vol. 19, No. 7, pp. 696-710.	
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	EE	SCHÖLKOPF, BERNHARD et al., "*Kernel Principal Component Analysis,*" Advances in Kernel Methods – Support Vector Learning, MIT Press (1999), pp. 327-352.	
	FF	SCHÖLKOPF, BERNHARD et al., "*Nonlinear Component Analysis As A Kernel Eigenvalue Problem,*" Neural Computation *(1998), Vol. 10, pp. 1299-1319.*	
	GG	SWETS, DANIEL L. et al., "*Hierarchical Disciminant Analysis for Image Retrieval,*" IEEE Transactions on Pattern Analysis and Machine Intelligence (May 1999), Vol. 21, No. 5, pp. 386-401.	

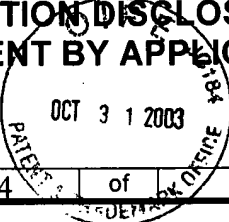| Examiner Signature		Date Considered	

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	HH	TEH, YEE WHYE et al., *"Rate-coded Restricted Boltzmann Machines for Face Recognition,"* Advances in Neural Information Processing Systems (2001), Vol. 13, pp. 908-914.	
	II	TENENBAUM, JOSHUA B. et al., *"A Global Geometric Framework for Nonlinear Dimensionality Reduction,"* Science (December 22, 2000), Vol. 290, No. 5500, pp 2319-2323.	
	JJ	WESTON, J. et al., *"Feature Selection for SVMs,"* Proceedings of the Advances in Neural Information Processing Systems (2001), Vol. 13, pp. 668-674.	
	KK	YANG, MING-HSUAN et al., *"Face Recognition Using Kernel Eigenfaces,"* Proceedings of the IEEE International Conference on Image Processing (September 2000), Vancouver, Canada, Vol. 1, pp. 37-40.	
	LL	ZHAO, W. et al., *"Discriminant Analysis of Principal Components for Face Recognition,"* Third International Conference on Automatic Face and Gesture Recognition (1998), pp. 336-341.	
	MM	International Search Report dated March 4, 2003 for International Application No. PCT/JP02/12649, filed on December 3, 2002.	
	NN	International Search Report dated August 26, 2003 for International Application No. PCT/JP03/09534 filed on July 28, 2003.	
	OO	Written Opinion from International Preliminary Examining Authority dated August 26, 2003 for International Application No. PCT/JP02/12649 filed on December 3, 2002.	

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